

Arizona Invasive Species Advisory Council

Research & Information Management Working Group

Tuesday August 27, 2007 Meeting Minutes

Attendees:

Kai Umeda (U of A Cooperative Extension)
Chasa O'Brien (AGFD)
Glen Fahringer (Landscape community; Town of Cave Creek)
Larry Riley (AGFD)
Brian Moorhead (SRP)
Ed Northam (Southwest Vegetation Management Association)
Alix Rogstad (ASDM)
Bill Werner (ADWR)
Jeffrey Myers (AZ Department of Agriculture)
Brian McGrew (AZ Department of Agriculture)
Tom Sharp (Mining Community)
Stuart Wells (Phoenix Zoo)
Fred Amator (AZ Crop Protection Assoc.)

Meeting Minutes:

The Arizona Invasive Species Advisory Council Research and Information Management Working Group was called to order at 10:30 a.m. on August 27th, 2007 at the Arizona Department of Agriculture conference room 206 located at 1688 W. Adams Street, Phoenix, AZ 85007.

Work Group Lead Kai Umeda welcomed the attendees. Chasa O'Brien, co-lead for the Work Group was also present to help facilitate the meeting. The objectives outlined in the charter were reviewed along with progress from the prior meeting of August 7th. The minutes from the August 7th meeting were reviewed. Kai Umeda sought a motion to adopt the minutes as written. Ed Northam offered the motion, seconded by Glen Fahringer. Minutes were adopted unanimously.

The Charter Objectives:

The objectives from the charter were the central focus of initial discussion. The prior meeting focused on the "Arizona Center for Invasive Species" concept. This was again identified as a critical point for the Research and Information Management component of a management plan for Arizona. Discussion was continued from the prior meeting, continuing to focus on some of the elements of the Center, with Research as the initial focus.

A list of potential researchers was discussed at the August 7th meeting.

The Work Group identified a need to resolve what areas need research. Research problem identification is critical. Identifying who is going to work on specific problem areas and avoiding

duplication of effort was discussed as a potential role a Center could play. Quagga mussels were discussed as a potential example. What pieces of information might have helped in response to quagga mussel. Larry Riley was called upon to provide some view as to information that would have helped with quagga rapid response. Larry responded with the following items:

- An on-the-shelf Rapid Response plan, already prepared would have been useful.
- Such a plan would be forward looking, anticipating detection and outlining response.
- A “plan” could identify key organizations for coordination and involvement in response if-and-when it would be triggered by detection.
- A “plan” could identify the strategy for alerting key organizations as well as a database of experts for consultation.
- A “plan” could identify strategies and responsibilities for monitoring and screening to detect early.
- A “plan” could identify an incident command structure with pre-identified roles, participants, and lead.
- A “plan” could identify containment, control, and eradication and treatment strategies if they were available.
- The focus of rapid response planning would be the functional components of how we respond.
- The 100th Meridian Initiative (US Fish and Wildlife Service, States, and other partners) played a significant role as a coordination point among involved states and provided a lot of the functions we use as our rapid response plan.

A question was posed by Mr. Fahringer regarding response to diseases as models for rapid response that perhaps could be used. A number of examples were discussed by members of the Work Group:

- The Plant Protection Quarantine (PPQ) functions of US Department of Agriculture and the Arizona Department of Agriculture were identified.
- The Chronic Wasting Disease Alliance was identified as a structure for responding. This includes States (Agriculture and Wildlife Agencies), the US Fish and Wildlife Service, and USDA APHIS.
- Within State coordination was discussed with a focus on the relationships among State Wildlife Department, Department of Agriculture, and Department of Health Services for collaboration and coordination on such issues and how it has worked in the past.
- The preparations and monitoring for Avian Influenza was identified as a collaboration (within state, and among states and the federal agencies) that will illustrate a model.

The Work Group discussed a need to utilize Research and Information Management in the form of a long-range radar to help develop search images for potential invasive species that could pose a risk to Arizona; and a near-range radar to actively assist monitoring for invasive species for which we have a search image in place. That discussion led to the following conclusions about roles of Research in invasive species management and functions of research associated with an Arizona Center for Invasive Species:

- The Research function can help inform managers in carrying out the “Anticipation” component of the Invasive Species Management Plan. The long-range and near-range radar allusion above can provide a “search image” for managers.
- Researchers can help identify those high risk or priority invasive or potentially invasive species that require further scientific research to determine level of risk they may pose for Arizona.
- Researchers can assist managers with identification of species as targets to monitor for in an early detection function. This informs the Anticipation component of a Management Plan to identify what we stay “on the look out” for. This informs a surveillance objective and strategy.
- Research can assist managers with science based risk assessments.
- Research can assist managers with development of risk assessment protocol development. This feeds into the Anticipation component of a Management Plan, particularly for potentially invasive species that may find their way to Arizona via unintentional introduction.
- Research can assist managers with development of screening protocols to determine risks for proposed intentional introductions of new species to Arizona.
- Research can assist with development of new or refinement of existing control, eradication, or containment techniques.

One approach that a Research coordination function of a “Center for Invasive Species” could facilitate was a “Think Tank” concept discussed by the group. The “Think Tank” would not necessarily be a formal standing organization, but be a facilitated symposium of researchers called together on some frequency (annual, every two years, every three years). This “Think Tank” concept would not be exclusive, but would focus around a core of invited Researchers with invited broader participation. The “Think Tank” could:

- Identify ‘unfriendlies’ – that is species of some potential threat to Arizona but as yet far away.
- Identify imminent threats from species that are closer to Arizona and for which some degree of threat is likely.
- Identify using specific criteria the potential importance to address these species in Arizona (based upon potential threat to economies, environment, and/or human health).
- Prioritize imminence of threat posed by the species identified, and in turn identify the need to develop better information via research based risk assessment.
- Consider the length of time necessary to conduct research about these species of priority as well as the risk/advisability of conducting research with these species in Arizona as opposed to locations away from Arizona.
- Prioritize the need for species specific risk assessments, which in-turn can trigger priority for development of:
 - Pathway investigations to inform and offer guidance to interdiction efforts and education/outreach efforts.
 - Rapid Response plans that could include identification of incident command structures.
 - Tools for monitoring, eradication, containment, control, or management.

The question was raised about how to prioritize research into specific invasive species. The elements from the Executive Order emerged as principle criteria – Risks to Human Health, risks of Economic Impact, and risk of impact to other species in Arizona/Ecological systems.

The Work Group identified that determining funding for invasive species research would be important and difficult. Where will financial resources needed to fund research come from? The Work Group identified that there may need to be separate and unique funding identified for the research component. Prioritization of where we invest those precious resources will be important. We need to separate our look outward towards what is not in Arizona as yet from what is here. Resources (for research, monitoring, or even control) could be rapidly consumed if it was all dedicated to things those things that are already here and widely established. That doesn't mean that some resources should not be dedicated to the concept of control and management of existing invasive species, but that resources and attention could be easily diverted from looking out for what might arrive next.

Flip Chart list of prioritization criteria follows:

- Economic impact
- Time to arrival / likelihood of arrival
- Human health concerns
- Ecological damage potential
- Level of existing information
- Length of time needed for research
- Research goal (e.g. – identification of potential impacts, identification of presence, control, monitoring, eradication)
- Cost of research
- Geographic area or site context (potential for invasion)

The Work Group delved into a discussion of species that are currently present and prioritizing research and monitoring efforts. Again, primary criteria from the Executive Order emerged - Risks to Human Health, risks of Economic Impact, and risk of impact to other species in Arizona/Ecological systems. But the following additional factors were identified to accompany the primary criteria:

- Current distribution is a criterion. If distribution is too widespread and control or eradication strategies are limited or infeasible, then perhaps it's not a wise investment.
 - For existing, wide-spread, established nonnative species, justification may be needed for expenditures on research and monitoring. This justification may be site specific, where there is a geographic or other context that justifies commitment of resources.
 - We will need to identify 'cut-points'. That is, how do we determine that further investment is not justified either because the species in question is too widely distributed, its occupation is irreversible. When do we determine that it is a resident species?
- Potential or observed rate of spread. If a species is detected early enough, and its potential or observed rate of spread is high, priority would be higher.

- These, and potentially other additional criteria, can trigger the need for active research, monitoring, as well as active efforts at eradication, control, management.
- One function that research and an Arizona Center for Invasive Species can play is to pull together existing tools for eradication, control, and management as well as development or refinement of tools.

Flip Chart list follows – species already present:

- Economic Impact
- Human Health
- Distribution
- Ability to spread, mode of transmission (Pathway)
- Ecological impacts
- Existing research/information – gaps in knowledge
- Research Goal – e.g. control, monitor, eradication
- Cost of research
- Geographical area/site context
- Focus areas

The Work Group identified the need for gap analysis. An effort, perhaps informed through the “Think Tank” approach described above, is needed to identify what research has not been conducted that is critical to inform management. This gap analysis, collaborative between researchers and managers, would identify gaps in our knowledge base and key information needs.

A recommendation emerged from the Work Group. We need to open focus areas in existing grant programs, where appropriate and allowable, to allow eligibility of invasive species research activities. These focus areas would provide some priority for invasive species research, and afford competitive opportunities for researchers and research institutions to finance critical work. Focus areas in existing grant programs from Arizona or from the Federal Government, where appropriate and allowable, might be developed from the prioritization and gap analysis described above.

The “Think Tank” function described above would be advisory to an “Arizona Center for Invasive Species”, but not a standing body. It might be something more akin to an annual or biennial symposium. It would create a list of possible incoming invasive species which could be reviewed on some frequency in this ‘symposium’ forum. The list would be managed and maintained by the Center. This list could provide some of the priorities for focal areas in need of research. These priorities could trigger the need to coordinate action/rapid response planning. The “Think Tank” concept could also be a forum for communication of information and research results – one of the potential functions of a “Center”. A coordinator (discussed in the first meeting of the Working Group) could maintain contact with relevant agencies, organizations, and interests.

The Work Group identified a question to be resolved. How do Hybrid Organisms or Genetically Modified Organisms fit into this question about Invasive Species? While the issue wasn’t

resolved, it was identified as something that we will need to incorporate into the approach we take for invasive species.

The Work Group discussed grants as sources of financing on a more specific scale. The following potential objective areas emerged:

- Identify language that could be inserted into existing state (and potentially federal) granting opportunities to define a focal (eligibility) area for invasive species research and development. This could be targeted at relevant existing funding sources.
- Identify the need (and potentially the amount) for new and unique funding resources for invasive species research and monitoring grants.

The Work Group brainstormed a list of existing granting opportunities. They included:

- Grants from the Arizona Game and Fish Department (Heritage Grants, Wildlife Conservation Fund Grants)
- The Arizona Water Protection Fund
- Forest Health Grants via USDA and the Arizona State Land Department
- Western Region Integrated Pest Management Grants through USDA Cooperative Extension (CREES)
- Urban Forest Grants (USDA)
- Federal National Research Initiative (NRI) grants
- National Fish and Wildlife Foundation Grants
- Association of Fish and Wildlife Agencies Multi-State Grants
- Southwest Joint Venture
- EPA Star Grants
- US EPA 319 and 304 grants
- Grants through “Critic Groups”, wildlife based NGOs
- NRCS Grants – EQIP, WHIP, Etc. based on state priorities.
- Corporate Academic Grants.
- Department of Transportation?
- Arizona Community Tree Council (private foundations and NGO), potentially USDA
- Special Interest Groups (e.g. TNC, RMEF, Ducks Unlimited, etc)
- Wildlife Coop units etc.

There is a desire on the part of the Work Group to assemble a more thorough and detailed list of grant opportunities for financing Research and Monitoring. It was suggested to start with www.grants.gov to search for existing federal grant opportunities.

Among our objectives should be development of “generic” language to make invasive species research an eligible function in granting opportunities. The Council and/or Center could assist with development of ‘scoring systems’ related to invasive species priorities in Arizona that could be used in grant proposal evaluations.

One element that emerged as funding opportunity was request for appropriations from the State Legislature.

As a “homework” item, the Work Group identified the following:

- Identify potential representatives or invited ‘core’ group of participants that might be part of a “Think Tank” concept.
- Begin to compile lists of grants or grant opportunities that could help finance an Arizona Center for Invasive Species and research and information monitoring. Should include in this listing the need for matching funds.
- Consider how we determine processes for prioritization of research in invasive species.
- Review our progress against objectives identified in the charter.

The Work Group anticipates a series of meetings during the month of September. The Work Group will meet next on September 6th at the Arizona State Land Department. Meeting will be at 10 AM, preceding the Council meeting, which begins at 1 PM at Arizona State Parks. Meeting adjourned at 12:30 PM.

LR:lr